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SUPERCONDUCTING ELECTRIC MOTOR

Abstract of the Disclosure

A superconducting motor which operates in a synchronous mode of operation, can also be operated in an induction mode in the event that the superconducting components of the motor lose their superconducting properties (e.g., due to cooling system failure).

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The superconducting electric motor includes a rotor assembly having at least one superconducting winding which, in operation, generates a flux path within the rotor assembly, and a support member which supports the at least one superconducting winding. The rotor assembly is configured to operate in a synchronous mode of operation at temperatures when the superconducting winding exhibits superconducting characteristics and in a steady-state induction mode of operation at temperatures when the superconducting winding exhibits non-superconducting characteristics.

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